THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D.C. 20505

Senior Review Panel

NIC 9079-83 16 December 1983

MEMORANDUM FOR:

Director of Central Intelligence

Deputy Director of Central Intelligence

SUBJECT:

Senior Review Panel Study of Intelligence Judgments Preceding Significant Historical Failures: The Hazards of Single-Outcome

Forecasting

I. Setting

1. This report summarizes the Panel's findings in an inquiry you directed it to make on the quality of intelligence judgments preceding significant historical failures over the last twenty years or so.

2. We used as a basis the cases you nominated for review and added a few others which have also had major consequences for US interests.

Chronologically, the

field we surveyed includes:

<u>Case</u>	<u>Critical</u> <u>Date</u>
The Likelihood of North Vietnam Intervention in South Vietnam	1945-1965
The Likelihood of All-Out Soviet Support of Hanoi	1950-1965
Cuba	1957
Sino-Soviet Split	1959
First Chinese Nuclear Test	1964

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Approved For Release 2007/12/19 : CIA-RDP85M00364R002104130001-3

The Soviet ALFA-Class Submarine	1969	
Libya	1969	
The OPEC Price Increase of December 1973	1973	
Ethiopia	1973	
Afghanistan	1978	
Iran	1978	
Nicaragua - The Nature of Somoza's Opposition	1978	

- 3. Our method of approach in general was to concentrate on Community and Agency publications—including typescripts and periodical articles—in the two or three years preceding the critical or transforming outcome. The retrieval effort varied widely, from a few years back to over twenty-five, and depending on the publications record, from less than a hundred items for each to more than four hundred. For each of our case studies, we attempted:
 - a. To determine the main lines of the analytical and estimative judgments of the period.
 - b. To examine the extent to which these judgments were supplemented by the use of alternative hypotheses, speculative analyses going beyond developments strongly supported by the evidence, or conjectures about lesser probabilities than favored outcome forecasts.
 - c. To judge whether more speculative approaches might have proved in the end more realistic and succeeded in alerting the policy community earlier to outcome potentials largely ignored at the time.
- 4. The attached case studies, while often reflecting discussions within the Panel, are individual essays by its members, as shown by initials at the end of each. The report's findings and views, which follow, have the concurrence of all Panel members.

II. Findings

have significantly improved in the last two or three years. No one we think can fairly read the record of these case studies without reflecting on recent qualitative improvements in the system. NIEs/SNIEs of the present period are simply better

written, better presented, more timely, and more relevant to policymaker needs. Recent Agency assessments provide better coverage, are analytically more thorough, have frequently superior estimative quality. We much doubt, for example, that practice today would overlook--for several years before and after--overseas developments of a significance to US interests similar to those in Libya in 1969, Ethiopia in 1974, Afghanistan and Nicaragua in 1978.

- 6. The one area in which we think contemporary production has not much improved is length of papers. Apart from technical studies, where special considerations apply, too many estimates remain too long for useful communication between the intelligence and the policy communities.
- 7. The strength of performance in the cases we have examined lay in the promptness, extent, and variety of current intelligence production. The main weaknesses were in analytical integration and estimative projections. These conclusions seem to us valid for each of the cases we have studied. But we do not think that all of them should be considered "historical failures."
 - Vietnam remains controversial, and it may be some years yet before history has a verdict on intelligence performance, as on other kinds of performance there. read the record, intelligence publications were throughout generally careful, realistic, and thorough. There were occasional errors of fact and interpretation, as in the use and utility of Sihanoukville. There was more of a tendency to overestimate the effectiveness of our initiatives than to underestimate those of our opponents. There were few--too few--broadly ranging strategic analyses. But on the two key issues we were asked to examine--North Vietnamese intervention in the South and all-out Soviet support to Hanoi--our conclusions are that the policy community and the Executive agencies had an adequate, if diffuse, body of intelligence available and that there is little basis to conclude that either constituted a strategic surprise.
 - b. Similarly, on <u>Cuba</u> and the significance of Castro a year or two before he took power and on <u>Nicaragua</u> and the nature of the opposition to Somoza, the <u>argument</u> can be made that the exercise of Community processes was belated, that early Agency assessments remained ambiguous longer than was desirable, and that there was too little speculation in the period when evidence was thin. But there seems to us no persuasive conclusion of failure. From 1957 on in the case of Cuba and from 1978 on Nicaragua, Community and Agency assessments clearly documented and projected the orientation of the main players and the probable and actual outcomes.

- c. And on the first <u>Chinese</u> nuclear test, occurring in 1964, the Community scored a successful prediction--albeit for a number of very wrong reasons.
- d. The other cases seem to us clearly a set of faulty intelligence judgments. In most, last minute or early retrospective analyses soon corrected the record, but there were significant failures to assess the direction of events and the strengths of competitive forces; to estimate goals, directions, and the velocity of events; and to anticipate probable outcomes early enough to alert policymakers to emerging new situations.
- 8. In the estimates that failed, there were a number of recurrent common factors which, in retrospect, seem critical to the quality of the analysis. The most distinguishing characteristic of the failed estimates—the Sino-Soviet split, the Qadhafi takeover in Libya, the OPEC price increase, the revolutionary transformation of Ethiopia, the Soviet invasion of Afghanistan, or the destruction of the Shah's Iran—was that each involved historical discontinuity and, in the early stages, apparently unlikely outcomes.
- 9. The basic problem in each was to recognize qualitative change and to deal with situations in which trend continuity and precedent were of marginal, if not counterproductive, value. Analysts of the period clearly lacked a doctrine or a model for coping with improbable outcomes. Their difficulty was compounded in each case by reluctance to quantify their theories of probability or their margins of uncertainty. Findings such as "likely," "probable," "highly probable," "almost certainly," were subjective, idiosyncratic, ambiguous between intelligence producer and consumer, uncertain in interpretation from one reader to another, and unchallenged by a requirement to analyze or clarify subordinate and lesser probabilities.
- 10. Too many of the analyses were incident-oriented and episodic; too few addressed the processes that produced the incidents or speculated about underlying forces and trends. And in many of the cases, information sources were not sufficiently representative, were themselves prisoners of continuity assumptions, and were ultimately overtaken by sequels they failed to foresee.
- In our view, however, the major factor in the failed estimates was overly cautious, overly conservative, single-outcome forecasting. Many of their judgments can be faulted in hindsight as clearly wrong. The case against them, however, is not so much retrospective error as contemporary inadequacy. For the most part, they rested on the prevailing wisdom of the time

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and were reinforced by professional assessments of the available evidence.

- 12. But in none of the flawed cases did contemporary analysts present or analyze, in their publications of record, alternative outcomes; speculate on possible developments suggested but not fully supported by "hard evidence;" or conjecture about lesser possibilities than their preferred most probable projections.
- 13. This addiction to single-outcome forecasting defied both estimative odds and much recorded history. It reinforced some of the worst analytical hazards--status quo bias and a prejudice towards continuity of previous trends, "playing it safe," mirror-imaging, and predispositions towards consensus intelligence. It was compounded by what the British call "perseveration" (a tendency for judgments made in the early stages of a developing situation to be allowed to affect later appraisals and an unreadiness to alter earlier views even when evidence requiring them to be revised becomes available) which narrowed collection requirements and froze their priorities to overtaken analytical frameworks. The practice invited failure.

III. A Few Observations

- 14. In our view, the central problems that emerge from our study are how to deal with inevitable uncertainty, how to manage concurrently both greater and lesser probabilities and how to cope with discontinuity and apparently unlikely outcomes. Single-outcome forecasting is clearly less than an ideal approach to these problems.
- 15. To attack them, probably the most important requirement is to increase sensitivities on the part of middle-level managers and analysts alike that these are in fact real problems and that failure to deal adequately with them will be invitational to repeated failures, both in the substance of projections and in the timeliness of intelligence advice.
- 16. The world will stay a chancy and changeable place and the only rule is perhaps that there is an inevitability of uncertainty which we ignore at our peril. Information at best will always be in some part fragmentary, obsolete, and ambiguous. "Hard evidence" about the future will remain a contradiction in terms. Intelligence professionals can, and should, attempt to decrease uncertainty, the number of surprises, and the unexamined consequences of their interacting variables. They cannot hope to live in an environment immune to the contingent, the unexpected, and the unforeseen.
- 17. The need is for estimative resources and efforts that are highly flexible, that take into account the extraordinarily

complex array of matters which determine future developments, that have a significant surge capacity, and that are addressed to contingent futures. Single-outcome forecasts poorly serve this requirement. They do not reduce uncertainty. They only increase the margins of surprise.

- 18. A number of your initiatives are obviously addressed to these issues: improved substantive leadership, more sophisticated training methodologies, heightened precision in collection targeting and techniques. We believe that substantial improvements have been made in the last several years.
- 19. To reduce and respect the claims of uncertainty and surprise, we think a few other substantive and procedural techniques merit consideration in the production of Community estimates (and, for that matter, Agency assessments) concerned with probable outcomes. In most such analytical problems, there is an initial distinction between two categories of cases:
 - a. Those in which the likely outcome and the distribution of probabilities cannot be agreed.
 - b. Those in which there is consensus on the likely outcome, but differences on the degrees of probability to be attached to it and to conceivable but less likely developments.
- 20. The former seems to us the easier case. Where there is no agreement on the most likely line of development—if the estimate cannot be deferred for further collection and analysis—greater reliance on separate, adversarial and competitive analyses would seem appropriate. The competing analyses, by whatever means derived, should go to the NIC for its collegial consideration and advice on relative probabilities. Any subsequent publication should, of course, contain analyses of the competing outcomes.
- 21. For the other category of cases, perhaps the preponderance, where there is general agreement on likely outcomes, we think that, as a general rule, NIEs/SNIEs should include an "Alternative Outcomes" section. Its main purpose would be briefly to spell out lesser probabilities and other possible developments--not fully supported by the evidence but suggested by visible clues, fugitive data, or newly emerging trends or personalities.
- 22. For the technique to work, two further changes in NIE/SNIE format would be indicated:
 - a. <u>Probabilities in both majority and minority cases</u> should be quantified. We do not favor elaborate arithmetical calculations or definitions. We think some rough

approximation--"slightly better than even," "two to one,"
"three to one," or possibly even "four to one"--would cover
most human events and be sufficiently precise for clear
communication between intelligence producers and consumers
and among disparate policy readers. Apart from this added
clarity, the value of the approach would be to emphasize the
possible prospects for alternative outcomes and to provide
improved guidance for the collection community.

b. A list of future indicators should invariably be included. Its aim should be to underline those contingent developments, decision points, and future policy crossroads which could affect the durability of the analysis, alter its major judgments, or influence the odds on outcomes.

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23. In the past generation, many Western analysts have assumed that, as the era of colonialism has drawn to a close, major change, systemic revolutions and radical transformations of society would be less frequent and progress toward democracy and peace more assured. Government change, palace revolutions, coups, etc., might occur but there would be fewer cases of historical discontinuity capable of fundamentally transforming political and social circumstances or abruptly altering power relationships. We think this a highly mistaken view. Over the next 20 years, the Community may well confront analytical and estimative challenges, no less severe, and very possibly much more complex, difficult, and dangerous, than those reviewed in this study. The prospects for historical failures will be no less present, and we must prepare for them.

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